

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has added new claim 15. Thus, claims 11 and 15 are now pending in the application. Applicant respectfully submits that pending claims define patentable subject matter.

Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over newly cited Vohlgemuth (U.S. Application Publication No. 2001/0015006) view of Rich (U.S. Patent No. 4,102,040). Applicant respectfully traverses the rejection.

Claim 11 is directed to a stator comprising:

a cylindrical iron core including a plurality of slots provided around an inner circumferential face of the cylindrical iron core, a plurality of concave portions provided around an outer circumferential face of the cylindrical iron core, and a plurality of notch portions provided in an inner wall surface of some, but not all, of the slots; and

a coil disposed in the slots,

wherein each of the notch portions comprises a linear slit extending partially through the cylindrical iron core in a radial direction so that the cylindrical iron core has a lower radial crushing strength at the notch portion than at other portions of the cylindrical iron core.

The Examiner asserts that Vohlgemuth discloses all of the features of claim 11 except for a plurality of concave portions provided around an outer circumferential face of the cylindrical iron core, which the Examiner maintains is disclosed by Rich. In particular, the Examiner asserts that Vohlgemuth discloses the claimed notch portions via element 19' in FIGS. 3-6. Applicant respectfully disagrees.

Vohlgemuth discloses a strip of lamination sectors for making a magnetic circuit of an electrical machine, wherein the sectors are interconnected by links which lie outside the sectors, and the strip is for winding on a mandrel to form a stack of layers of sectors. As shown in FIG. 3, pairs of consecutive sectors 11' are interconnected by a bridge 30 of material made by being cut out together with the sectors 11' from a single piece of material. This material bridge 30 is connected at one end to the outer peripheral edge 16' of one sector 11 and has a middle portion 31 which deforms slightly away from its plane when adjacent edges 19' of the sectors 11' are brought together during winding onto a mandrel.

However, Vohlgemuth does not disclose the claimed notch portions which comprise a linear slit extending partially through the cylindrical iron core. In Vohlgemuth, the slit formed between the adjacent edges 19' of the sectors 11' extends completely through the core since the bridge 30 interconnecting the sectors 11' lies outside the outer circumferential face of the sectors 11'.

Similarly, Rich does not teach or suggest this feature of claim 11 which is missing from Vohlgemuth.

Accordingly, Applicant respectfully submits that claim 11 should be allowable because the cited references, alone or in combination, do not teach or suggest all of the features of the claim.

By this Amendment, Applicant has added new claim 15 to further define the claimed invention. Applicant respectfully submits that the cited references do not teach or suggest “the cylindrical iron core is formed a helically wound band plate which includes the linear slits which are abutted and aligned”, as claimed.

As discussed above, Vohlgemuth discloses that the bridges 30 interconnect the sectors 11' having fan-like shape, and the bridges 30 lie outside the outer circumferential face of the sectors 11'.

On the other hand, in an embodiment of the present invention, the band plate, which includes linear slits, is wound helically and formed cylindrically so that the linear slits are abutted and aligned.¹ Thus, the configuration of the claimed invention is clearly different from that of Vohlgemuth. Further, according to the above feature, the iron core of the present invention does not have a protruding portion lining outside the outer circumferential face, and the downsizing can be realized.

Accordingly, Applicant respectfully submits that new claim 15 recites further patentable features which render the claim allowable over the cited references, alone or in combination.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

¹ See, for example, specification at paragraph bridging pages 15 and 16.

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Respectfully submitted,

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Date: September 27, 2007